

CLIMATOLOGICAL DATA FOR MAY, 1913.

DISTRICT NO. 2, SOUTH ATLANTIC AND EAST GULF STATES.

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GENERAL SUMMARY.

The weather conditions, especially with reference to the element of temperature, were rather diversified in various portions of the district during May. For instance, although the warmest weather for the month occurred on the 3d to 5th in Virginia and North Carolina, in the remaining portions of the district the 30th and 31st were the warmest days, and in Alabama a warm spell occurred on the 19th, which was not felt at all in adjoining States. Again, a decided cool wave, with temperatures slightly below freezing as far south as eastern North Carolina overspread the northern portion of the district on the 11th and 12th, which was slightly felt in northern Georgia, while over most of the district the 1st was the coldest day, and in Mississippi and Alabama a marked cool spell occurred on the 24th and 25th. The average temperatures for the Mississippi area, Florida, and southern Georgia were slightly below normal; in the remainder of the district they were slightly above normal.

The drought that prevailed in several sections during the latter part of April continued during early May, hardly relieved by the scattered showers that fell during the first decade, until the more general rains set in about the middle of the month. The precipitation was generally below normal, except in the Virginia and Mississippi areas, the deficiencies slightly exceeding an inch in South Carolina, Georgia, and Alabama.

A few severe thunderstorms were reported during the month with hail and unusually high wind velocities.

High atmospheric pressure prevailed steadily from the 1st to the 15th, with the maximum for the district, 30.35 inches at Hatteras, N. C., on the 5th. During the remainder of the month the district came under the influence of several areas of low atmospheric pressure of moderate force, especially that central between Atlanta and Asheville on May 23, which extended on the following morning as a depression along the Atlantic coast from Jacksonville, Fla., to Eastport, Me., and the storm over eastern North Carolina on the 28th, which gave the lowest pressure for the month, 29.63 inches at Hatteras. The unusually severe local storms at Norfolk on the 30th and at Atlanta on the 31st appear to have had little to do with the distribution of pressure, but were caused by unstable atmospheric equilibrium due to intense heat.

TEMPERATURE.

The mean temperature for the district as a whole was 70.9° , or 0.2° below the normal, but this resulted from the fact that the deficiencies of over a degree in Florida and Mississippi slightly overbalanced the small excess for the month registered in other portions of the district. The monthly mean temperatures at individual stations generally ranged between 65° and 75° . The extremes were Key West, Fla., 77.8° , and Hot Springs, Va., 61.8° .

Over the southern portion of the district the 1st was generally the coldest day in the month, except that in Alabama and Mississippi a marked lowering of the temperatures occurred on the 24th and 25th. The remainder

of the first decade was comparatively warm, especially so in Virginia and the Carolinas, where the highest temperatures for the month were registered from the 3d to 5th. The succeeding change to cooler weather culminated on the 11th and 12th in the northern portion of the district, with temperatures of from 30° to 44° , making this period one of the coolest for May in the climatic history of Virginia and eastern North Carolina. The line of freezing temperature extended southeastward to the headwaters of the Roanoke and into eastern North Carolina. Light to heavy frosts, apparently without causing much damage, occurred on the 11th or 12th at numerous stations in Virginia and North Carolina, but the low temperatures retarded the growth of vegetables. No frosts occurred elsewhere in the district.

Another period of moderately cold weather prevailed from about the 23d to 26th, with the lowest temperatures for the month on the 24th in Alabama and Mississippi. The remainder of the month was warm and very high temperatures were general on the 30th and 31st, reaching 90° in all sections, and exceeding 100° in South Carolina, Georgia, and Florida. In Georgia previous records for high temperatures in May were broken at several stations. The maximum temperatures ranged from 102° , at Statesboro and Dublin, Ga., on the 30th or 31st, to 94° on the 3d, at Callaville, Va. The minimum temperatures were slightly below freezing on the 12th in Virginia and eastern North Carolina, with the lowest, 30° , at Lassiter, Va., but were generally not below 40° in other portions of the district.

PRECIPITATION.

The average rainfall for the district was 3.59 inches, which is 0.34 inch below the normal. The rainfall was below normal in all portions except western North Carolina and Virginia and the Mississippi areas, where there was a moderate excess. The largest amount for the month was 9.75 inches at Laurel, Miss. The total for the month exceeded 9 inches, also at Cochrane, Ala., Fort Lauderdale, Fla., and at Hampton, Va. The least amount occurred at Charleston, S. C., and Eastman, Ga., 0.19 inch.

As a rule, only light, scattered showers occurred during the first decade, but after the 15th the rainfall was more copious and general, the largest amounts occurring in the northern portions of the district on the 16th to 17th, 24th and 27th to 28th, and in the southern portions on the 21st to 24th. The maximum rainfall in 24 hours exceeded 2.50 inches at comparatively few stations. The greatest 24-hourly rainfall for the district was 5.20 inches at Cochrane, Ala., on the 21st-22d. The average number of days with appreciable rainfall was 7.

The drought that began about the middle of March continued in nearly all sections of Georgia until broken by the general rains of the 17-24th. Previous to the 17th no appreciable rainfall was recorded at Americus for 30 days, at Butler and Marshallville for 34 days, and at Valdosta for 48 days.

MISCELLANEOUS PHENOMENA.

The prevailing winds for May were from the southwest or west in all States in the district, except Mississippi and Florida, where they were respectively from the south and east. The wind movement was fairly high, the average hourly velocities exceeding 10 miles at Norfolk and Cape Henry, Va., Hatteras, N. C., Charleston, S. C., Atlanta and Savannah, Ga., and Pensacola and Sand Key, Fla. Velocities exceeding 40 miles an hour occurred as follows: Norfolk, Va., 62 miles, from the north, on the 30th; Cape Henry, 44 miles, northwest, on the 7th; Atlanta, 60 miles, northwest, on the 31st.

The average number of clear days for the district was 18, partly cloudy 7, cloudy 6, and rainy days 7.

The percentage of sunshine was fairly high at all stations, with a maximum of 84 per cent at Charleston, S. C., and a minimum of 64 per cent at Hatteras, N. C. The average number of hours of sunshine for the district was 318, which is 74 per cent of the possible amount.

SEVERE LOCAL STORMS.

Norfolk, Va.—A severe thunderstorm attended by violent gusts of wind occurred on the evening of May 30. The storm moved from north to south and the wind attained a maximum velocity of 62 miles an hour from the north at 6.12 p. m. Several manufacturing plants were badly damaged and over 60 small buildings in Berkley, South Norfolk, and along the river were more or less injured. The total damage is estimated at \$75,000.

South Carolina.—During the afternoon of May 27 a tornado caused considerable damage at Honea Path, Anderson County, S. C., but no one was killed.

On May 10, during a heavy rain and wind storm near James Island, hailstones as large as partridge eggs were reported to have fallen, causing considerable damage to trucking interests. Four people were drowned by the capsizing of a boat during the squall.

Serious damage to a cotton plantation on Wadmalaw Island resulted from a hailstorm on the 28th in that vicinity.

Georgia.—*Atlanta:* A severe thunderstorm prevailed on the afternoon of May 31, which seems to have covered a very extended area. The remarkable feature about the storm at Atlanta was the duration of the high wind. For half an hour, from 3.55 to 4.25 p. m., the wind ranged from 50 to 60 miles an hour. Several large plate glass windows were shattered.

Similar severe storms occurred about the same time at West Point and Dublin, Ga. At Dublin lightning set fire to several houses, the largest one being the commissary of the Oconee Cotton Mills, which was burned to the ground; loss, \$2,000. The display of lightning was particularly impressive.

RIVER CONDITIONS.

Moderately high stages occurred in the James River on the 24th and 25th, with crest stages of 23.4 feet at Columbia, Va. (flood stage 18 feet) on the 24th, and of 12.5 feet at Richmond, Va., on the 25th (flood stage 10 feet).

The mean stages of the rivers in North Carolina were below the normal for May. A moderate flood occurred in the Roanoke on the 24th to 27th, the river rising to a maximum stage of 36.2 feet at Weldon, N. C., on the 27th (flood stage 30 feet). Warnings were issued and no damage to property resulted. Estimated loss by suspension of work about \$2,000. Cattle were driven out

of the lowlands without loss, resulting in a saving of about \$5,000.

The rivers in South Carolina, Georgia, and eastern Alabama did not attain flood stages at any point. In the Pedee River a sharp rise beginning on May 24th gave a stage of 22.2 feet at Cheraw, S. C., two days later, and the river continued above normal to the close of the month.

Low stages prevailed in the Tombigbee and Black Warrior Rivers until about May 23, when a rapid rise was reported as a result of the heavy rains that commenced May 21. A crest stage in the Black Warrior River at Tuscaloosa of 45.5 feet occurred at noon on May 24. The stage of the Tombigbee River at Demopolis was 30.8 feet on May 25, when warnings were issued for a rise above the flood stage in about 2 days. The crest stage was 35.4 feet at 5 p. m., May 27. Some of the lowlands on Black Warrior River below Tuscaloosa were flooded, with a probable loss to crops of about \$4,000, and a loss due to the suspension of farm labor of about \$200. A loss estimated at about \$500 was also sustained by the flooding of farms on the Tombigbee River below Demopolis.

The rivers in Mississippi located in district No. 2 were relatively low throughout the month, excepting the Chickasawhay River, which reached flood stage at Enterprise on the 24th and at Shubuta on the 26th, with crest stages of 18.6 and 25 feet, respectively. This together with a moderate rise in the Leaf brought the Pascagoula at Merrill up to 17 feet, or within 3 feet of flood stage on the 29th.

The West Pearl River at Pearl River, La., began to rise near the close of April and reached a stage of 13.8 feet on May 3, or 0.8 feet above flood stage. A second rise occurred on May 27 to 12.3 feet. No material damage resulted from the floods in Chickasawhay or Pearl Rivers.

SEVERE HAILSTORM ON JAMES ISLAND, S. C.

[By J. H. SCOTT, Local Forecaster, Charleston, S. C.]

A hailstorm of more than usual severity, accompanied by heavy thunder and high winds, visited James Island, a few miles south of Charleston, S. C., at about 4 p. m., May 10, 1913. The storm moved from west to east across the center of the island, bearing slightly to the north. The hailstones were small, being described as about the size of partridge eggs, but were sufficiently numerous to cover the ground in places to a depth of 3 or 4 inches. There was very little rain with the hail, and notwithstanding the fact that the afternoon was comparatively warm, it was several hours before all the hailstones were melted. In the region of greatest damage, which was about 1 mile in width and 3 miles in length, both the cotton and the truck crops suffered severely, necessitating replanting in some instances. Young beans were knocked from the vines and the bean leaves were riddled, while cucumber vines were cut in pieces. The plantations of H. H. Ficken, James Frampton, J. A. Lawton, and W. M. Frampton seem to have suffered most. The material damage is overshadowed, however, by the toll of human life taken by the storm. One man and 5 children, all negroes, were fishing from a small boat on the beach front when the storm struck, sweeping the boat rapidly off shore. The occupants, becoming frightened, jumped from the boat, and only 2 of them succeeded in their battle against the waves, the man and 3 children perishing. The father of the drowned children was in Charleston buying food and presents for them, and upon returning home was so stunned by the disaster to his family that fears for his life were entertained.

